

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A communication proxy apparatus comprising an access request agent means, wherein:

said access request agent means, which is placed on a communication path between a server device and a client devices; receives an access request for an access to information data held in the server device from the client device or other communication proxy apparatuses; issues the access request, as an agent, to the server device or still another communication proxy apparatus; obtains the requested information data and attribute information of the information data; and returns the obtained data; and

said communication proxy apparatus has an individual action control means comprising:

an individual action storage means for holding individual action definition information indicating a relationship between the information data and action information that indicates an action to be executed for the specific information data processed by the communication proxy apparatus as an agent, and that indicates execution conditions of the action;

an individual action instruction means for registering individual action definition information in the individual action storage means; and

an individual action execution means for executing an individual action for the information data, which is ~~instructed by~~ the data obtained from the server device,
based on the individual action definition information, under instructed conditions.

2. (original) A communication proxy apparatus according to Claim 1, wherein:

said individual action instruction means comprises a means by which, if registration in the individual action storage means is instructed by an explicit instruction containing identification information of target information data and action information to be executed for the information data, or if as a result of checking information data received by the communication proxy apparatus, it is found out that an individual action tag for instructing action information to be executed for the information data is added to the information data, individual action definition information of the information data is registered in the individual action instruction storage according to the action information; and

the individual action tag control means comprises an individual action tag adding/removing means for adding the individual action tag or removing the added individual action tag, under a certain condition, when transmitting from the communication proxy apparatus the information data received by the communication proxy apparatus, and the added data received together with the information data.

3. (original) A communication proxy apparatus according to Claim 2, wherein:

said individual action definition information comprises an action type classification information for specifying action definition information is registered according to identification information of target information data and explicit instruction of action information, or that the individual action definition information is registered by an individual action tag added to the information data;

the individual action instruction means comprises a means for registering the action type classification information when individual action definition information of each information data is registered in an action storage means; and

the individual action tag adding/removing means comprises a means for adding an individual action tag corresponding to the information data before transmitting the information data, when for the information data transmitted from the communication proxy apparatus, the identification information of the information data and individual action definition information explicitly specified by action information is stored in the action storage means.

4. (original) A communication proxy apparatus according to Claim 2, wherein:

the individual action tag adding/removing means comprises a means for removing the individual action tag before transmitting the information data, when the communication proxy apparatus transmits information data with the individual action tag added, and if the destination is said client devices.

5. (original) A communication proxy apparatus comprising an access request agent means, wherein:

said access request agent means, which is placed on a communication path between a server device and client devices; receives an access request for an access to information data held in the server device from the client device or other communication proxy apparatuses; issues the access request, as an agent, to the server device or still another communication proxy apparatus; obtains the requested information data and attribute information of the information data; and returns the obtained data; and

said communication proxy apparatus has a distributed access control means comprising:

an access logging instruction means for instructing the communication proxy apparatus to keep an access log of an access request for specific information data;

an access logging means for logging an access by a device or a user from which an access request is issued, when the communication proxy apparatus handles the access request for information data for which an access log is instructed by the access logging instruction means;

an access log storage means for holding a access log kept by the access logging means;

a hierarchical execution means for: receiving a processing request instruction for specific information data; executing the instructed processing request for the instructed information data; transferring the processing request instruction to

communication proxy apparatuses of lower levels, of which the access log storage means keeps an access log for the instructed information data; after executing the processing request hierarchically, aggregating execution results obtained from the communication proxy apparatuses of lower levels and an execution result of own communication proxy apparatus; and returning the aggregated results.

6. (original) A communication proxy apparatus according to Claim 6, said communication proxy apparatus comprising:

an access logging means for logging an access by a device or a user from which an access request is issued, when the communication proxy apparatus handles the access request information data for which an access log is instructed;

an access log storage means for holding an access log kept by the access logging means;

a means by which when receiving an processing request instruction for specific information data, the instructed processing request for the instructed information data is executed; and a hierarchical execution means,

said hierarchical execution means comprising:

a means for transferring the processing request instruction to communication proxy apparatuses of lower levels, of which the access log storage means of the communication proxy apparatus stores an access log for the instructed information data; and

a means for aggregating executing results obtained from the communication proxy apparatuses of lower levels and an execution result in own communication proxy apparatus, and for returning the aggregated result, after the processing request is executed hierarchically, wherein

the individual action instruction means has a means for instructing execution of the access logging means with timing of access request processing for the information data, as the individual action for the information data that is an access-log target, in response to an access request for the specific information data.

7. (original) A communication proxy apparatus according to Claim 1, wherein:

the individual action control means further comprises a means for holding action expiration time information representing expiration time of the individual action definition information as the individual action definition information; and

the individual action execution means comprises a means for executing an action defined by the individual action definition information before expiration time indicated by the action expiration time information, and for deleting the individual action definition information automatically after the expiration time.

8. (original) A communication proxy apparatus according to Claim 1, wherein:

said individual action definition information comprises an action type classification information for specifying that the individual action definition information is registered according to identification information of target information data and

explicit instruction of action information, or that the individual action definition information is registered by an individual action tag added to the information data; and

said individual action instruction means comprises:

a means for registering the action type classification information when individual action definition information of each information data is registered in the action storage means;

a means by which whether or not an individual action tag has been added to received information data is checked, and if the individual action tag is not added, whether or not an individual action definition information is held in the individual action storage means is checked; and

a means by which if individual action definition information corresponding to the information data exists, and if it is found out that the individual action definition information has been registered using an individual action tag judging from the action type classification information of the individual action definition information, the individual action definition information is deleted.

9. (currently amended) A communication proxy apparatus according to Claim 4Claim 2, wherein:

the individual action instruction means comprises a means for holding an action instruction, which should be executed for ~~specific information data~~said individual action tag, as a form of processing program; and

the individual action execution means comprises a means for executing the held processing program as an individual action for ~~the information data~~said individual action tag.

10. (currently amended) A communication proxy apparatus according to ~~Claim 4~~Claim 9, wherein:

said communication apparatus comprises:

a program load means for loading a processing program in the communication proxy apparatus;

a program storage means for storing a loaded program;

and an action program correlation table that hold a relationship between a program entry address and action identification information;

said program load means comprises:

a means for receiving an instruction including action identification information and program information to be loaded, and for storing the program information in the program storage means; and

a means for registering a relationship between an entry address of the stored program information and specified action identification information in the action program correlation table; and

the individual action control means uses the information registered in the action program correlation table to execute the corresponding individual action program.

11. (original) A communication proxy apparatus comprising an access request agent means, wherein:

said access request agent means, which is placed on a communication path between a server device and client devices; receives an access request for an access to information data held in the server device from the client device or other communication proxy apparatuses; issues the access request, as an agent, to the server device or still another communication proxy apparatus; obtains the requested information data and attribute information of the information data; and returns the obtained data; and

said communication proxy apparatus has a distributed access control means comprising:

an access logging instruction means for instructing the communication proxy apparatus to keep an access log of an access request for specific information data;

an access logging means for logging an access by a device or a user from which an access request is issued, when the communication proxy apparatus handles the access request for information data for which an access log is instructed by the access logging instruction means;

an access log storage means for holding an access log kept by the access logging means; and

a hierarchical execution means for: receiving a processing request instruction for specific information data; executing the instructed processing request for the

instructed information data; transferring the processing request instruction to communication proxy apparatuses of lower levels, of which the access log storage means keeps an access log for the instructed information data; after executing the processing request hierarchically, aggregating execution results obtained from the communication proxy apparatuses of lower levels and an execution result of own communication proxy apparatus; and returning the aggregated results.